

**DIFFERENT USABLE PARTS OF PLANTS (PRAYOJYANGA) AND THEIR
COLLECTION PERIODS (SANGRAHAN KALA) MENTIONED IN AYURVEDA****Dr. Ranjna Kapoor^{*1}, Dr. Navneet Vaidya² and Dr. Rashmi Srivastva³**^{1,2}MD Scholar of Deptt. of Dravyaguna RGGPG AYU. College & Hospital Paprola Distt. KANGRA HP.³Reader, Deptt. of Dravyaguna RGGPG AYU. College & Hospital Paprola Distt. KANGRA HP.***Corresponding Author: Dr. Ranjna Kapoor**

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ABSTRACT

Ayurveda is an ancient science and it holds high esteem and trust in the field of medication and treatment of various diseases. Over the past decade, *Ayurvedic* drugs have become a subject of world importance, with both medicinal and economical implications. These *Ayurvedic* drugs are obtained from different kind of sources like some from plants, some from animals etc. *Acharayas* have been described on the basis of the useful parts of *Dravyas* obtained from what kind of sources i.e. (1) *Audbhida*- the plant origin- Drugs of this origin are about 75%. Ex. Root, stem, rhizome, fruit, seed, leaves, bark, etc. (2) *Jangma*- animal origin- Drugs of this origin are about 10%. Ex. Musk, honey, milk, ghee, curd, etc. (3) *Parthiva* - Mineral origin- Drugs of this origin are about 15%. Ex. *Abhrak*, *Parada*, *Hartal*, *Gandhaka*, etc. All these types of *Dravyas* are commonly used in therapeutics. The various parts of plants are used to prepare medicaments. The different parts of the same plant will have different actions. Therefore, the study and understanding of different parts of the plant should be given importance. In the medicinal plants, the secondary metabolites or active principle are made available through proper part which get used and the specific period of collection as our *Acharyas* have been already described very beautifully and are also proven by modern scientific methods. To attain a good therapeutic result it is mandatory to collect the drug with optimum *Rasaveeryadi* qualities. In *Ayurvedic* literature, drug collection has been mentioned according to different parts of the plant in respective seasons, *Nakshatras*, *Veeryas* on the basis of therapeutic uses.

KEYWORDS: *Prayojyanga, Sangrahan kala, Ayurveda, Audvidha gana.***INTRODUCTION**

More than 90% of the species used in trade continue to be sourced from wild of which about 2/3rd are harvested by destructive means (harvesting of whole plants, roots, wood and bark) leading to rapid decline in the availability of many of the medicinal plant species.

One should collect the drug with highest pharmacotherapeutic activity so that the dosage required for prescription will be reduced, thereby reducing the number of plants to be chopped off for medicinal purpose specially medicinal plants whose roots are used. *Acharya Charaka* emphatically describes an excellent design of drug research and given much importance for season of collection along with place and method of collection. He describes the technical excellence in the field of pharmacognostical, pharmaceutical and pharmatherapeutical sciences as “*Tasyapium pariksha idamevam Prakruti*” etc. Here “*evam ritu*” the season for collection of drug plays an important role in the field of drug research¹. In *Ayurvedic* classics, drug collection has been described in four major steps i.e. *Bhumi pariksha* (selection of land), (Selection of drug),

Sangrahaniya Vidhi (Method of cultivating) and *Sangrahaniya Kala* (Time for collection). To procure best qualities of drug the proper place of collection part, method and time for collection are more important. While collecting the factors such as *Guna*, *Desha*, *Kala*, *Pakva*-*apakva* *avastha*, *nav*-*purana* *avastha*, *Prayojyanga*, *karma* and *Disha* should be given importance.

MATERIALS AND METHODS

Ayurvedic classics and lexicons, research papers documented about collection periods of different parts of plants compiling the information.

OBSERVATION AND RESULT**Different usable parts of plants mentioned by different *acharyas*****According to *Acharya Charaka***

मूलत्वकसारनिर्यासनालस्वरसपल्लवाः ।

क्षाराः क्षीरं फलं पुष्पं भस्म तैलानि कण्टकाः ॥

पत्राणि शुङ्गाः कन्दाश्च प्ररोहाश्चौद्भिदो गणः । (च0सू1/74)

According to *Charaka* the different parts of *Audbhida* used in medicine are *Mula*, *Tvak*, *Saara*, *Niryasa*, *Nala*, *Svarasa*, *Pallava*, *Patra*, *Ksara*, *Ksira*, *Phala*, *Puspa*, *Bhasma*, *Taila*, *Kantaka*, *Kaanda* and *Praroaha*.^[1]

According To *Acharya Sushruta*

Sushruta mentioned *Tvak* (bark), *Patra* (leaves), *Phala* (fruit), and *Mula* (root) which are known as *Panchanga* (five parts) and are commonly used. But during the description of *Sthavara vishas* he has mentioned ten usable parts those are *Mula*, *Patra*, *Phala*, *Pushpa*, *Tvak*, *Ksheera*, *Saara*, *Niryasa*, *Dhatu*, *Kanda*.^[2]

According To *Acharya Sharngdhara*

च्यग्रोधादेस्त्वचो ग्राह्यास्सारं स्याद्वीजकादितः ।
तलीसादेश्च पत्राणि फलस्यत्रिफलादितः ॥
धातक्याश्च पुष्पाणि स्नुह्यादेक्षीरमाहरेत् ।
शाखां गुडुचिकादेस्तु निर्यासं रामटादितः ॥ (शा.पू.खं.1/69-70)

According to *Sharangdhara*, useful parts of plants with examples are given as

Tvak- Nyagrodha etc., *Saara- Bijaka* etc., *Patra- Talisa* etc., *Phala- Triphala* etc., *Puspa-*

Dhatki etc., *Ksira- Snuhi* etc., *Sakha- Guduci kanda* etc., *Niryasa- Hingu* etc.^[3]

According To *Kaiydev Nighantu*

पंचाङ्गञ्च तरोः पुष्प फलत्वङ् मूलपत्रकैः ।
दशाङ्ग सार निर्यासं शाखा शुङ्गपयोऽन्वितैः ॥
क्वचिच्छाखापयः स्थाने वृन्तकण्ठौ प्रकीर्तितौ ॥ (कै.नि. 8/7-8)

According to *Kaiyyadeva* the different parts of plants used are mentioned as *Panchanga* and *Dasanga*. The *Panchanga* or five parts are *Puspa*, *Phala*, *Tvak*, *Mula*, *Patra*.

The *Dasanga* or ten parts are *Puspa*, *Phala*, *Tvak*, *Mula*, *Patra*, *Sara*, *Niryasa*, *Sakha*, *Sunga* and *Kshira*.^[4]

According to *Amarkosha*

In *Amarkosha*, following parts of plant are mentioned: *Prakanda* (stem); *Sakha* (branch); *Sipha* (fibrous root); *Avaroha* (arial root); *Sikhara* (crown); *Mula* (root); *Sara* (heartwood); *Tvak* (bark); *Kastha* (wood); *Kotara* (cavity); *Ankura* (sprout); *Patra* (leaf); *Pallava* (young leaves); *Vistara* (expanse); *Vrnta* (petiole or pedicel); *Kalika* (flower bud); *Manjri* (raceme); *Stabaka* (cluster of buds); *Ksarka* (fresh buds); *Mukula* (slightly opening bud); *Puspa* (flower); *Makaranda* (nectar); *Paraga* (pollen grains); *Phala* (fruit); *Salatu* (unripe fruit); *Vana* (dried fruit).^[5]

* *Raj nighantu* also describes these parts adding with *Parnasira* (midrib).^[6]

Collection of Different Parts of Plants During Specific Season

Medicinal plant materials should be collected during the appropriate season or time period to ensure the best

possible quality of both source materials and finished products. It is well known that the quantitative concentration of biologically active constituents varies with the stage stage of plant growth and development.

Different *Acharayas* of *Ayurveda* has been described the different seasons for the collection of different parts of plants.

Acharya Charaka quotes the importance of *Ritu* in germination and growth of medicinal plants. Proper season has been qualified as the season during which the plant intended for collection should have *Rasa* in abundance, *Veerya*, and *Gandha*. He highlighted the role of 'Kala' in the formation of drug properties and mentioned specific seasons for the collection of different parts.^[1] He categorically pointed out that the drugs growing seasonally are only to be collected.

Sushruta and Vagbhata opines that in view of the *Agnisomya* nature of world, he suggested *Ushna* and *Sheeta Veerya* drugs should collected in *Agneya ritu* and *Saumya ritu* respectively.

Ashtanghritya, quoted about the collection of drugs in their fully matured condition on *Pushya*, *Mrigshira* and *Ashwini Nakshatra* and on auspicious time in a day.^[7]

Sharngdhara quotes the *Sharad* as the best period to collect the drug for all therapeutics uses and also drugs intended for *Shodhana karma*. In case of *Vamana* and *Virechana* drugs can be preferably collected at the end of *Vasant ritu*.^[8]

Bhavprakash specified the collection on auspicious day that to in the early morning.^[9]

It is the *Raj nighantu*, the lexicon which mentioned the specific *ritus* for the collection of different parts of the plant.^[10] The herbs growing in the muddy ponds and lakes should be collected during *Sharad ritu* may be due to natural cleansing of water. *Sangraha kala* of various parts in different seasons shows a systemic scientific reason of transportation of secondary metabolites from one part to another to live fit in ecological condition. The *Dravyasangraha kala* as per all *Acharyas* mentioned has similarity except *Sushruta* suggested *Phala* collection in *Greeshma* and *Raj Nighantukara* mentioned *Pushpa* collection in *Vasanta* while others have told it as *Yatharitu* (fruit and flowering season). The *Sara* collection is mentioned in *Vasant Ritu* by *Sushruta* where others have mentioned it in *Hemant*. The *Moola* in *Greeshama* and *Shishira ritu*, *Kanda* in *Sharad* (after rainy) season shows the storage of nutrients and chemical constituents in those parts, indicating the self protecting phenomenon of plants also.

Table 1: Dravyasangrahan kala (collection period) according to part of plant used.^[11]

<i>Prayojyanga (Useful part)</i>	<i>Charak</i>	<i>Sushruta</i>	<i>Ashtang sangraha</i>	<i>Raj Nighantu</i>
<i>Kanda (tuber)</i>	<i>Sharad</i>	--	<i>Sharad</i>	<i>Hima</i>
<i>Ksheera (latex)</i>	<i>Sharad</i>	--	<i>Sharad</i>	--
<i>Moola (root)</i>	<i>Greeshama Shishira</i>	<i>Pravritta</i>	<i>Greeshma</i>	<i>Shishira</i>
<i>Patra (leaves)</i>	<i>Varsha, Vasant</i>	--	<i>Varsha, Vasant</i>	<i>Nidagha</i>
<i>Phala (fruit)</i>	<i>Yatha ritu</i>	<i>Greeshma</i>	<i>Yatha ritu</i>	--
<i>Pushpa (flower)</i>	<i>Yatha ritu</i>	--	<i>Yatha ritu</i>	<i>Vasanta</i>
<i>Shakha (branches)</i>	<i>Varsha, Vasant</i>	--	<i>Varsha, Vasant</i>	--
<i>Sara (heartwood)</i>	<i>Hemant</i>	<i>Vasant</i>	<i>Hemant</i>	--
<i>Twak (bark)</i>	<i>Sharad</i>	<i>Sharad</i>	<i>Sharad</i>	--

Specific useful parts collection methods in Ayurvedic literature: 1) *Charaka* suggests to collect mature fruits of *Madanaphala (Randia spinosa)*, in between *Vasanta* (spring) and *Greeshma* (summer) season on *Pushya*, *Ashwini* or *Mrigashira Nakshatra*. 2) The tender leaves of *Ikshwaku (Lagenaria siceraria)* should be collected before flowers appear on the climber. 3) *Trivritta (Operculina turpethum)* should be collected for purgative therapy during *Shukla Paksha* (the lunar cycle of full moon phase). 4) Latex of *Snuhi* (*Euphorbia* species) should be collected at the end of *Shishira Ritu* (winter season) from the plant which is two or three years old. According to Modern sciences, drugs possess highest potentiality during its collection period. The climate, temperature, rain fall, duration of day light, altitude, methods of cultivation, effect of lunar cycle, collection from wild area, soil condition and methods of collection, processing and storage have impact on the secondary metabolites of the plant ultimately which affect the therapeutic efficiency of the drug.

DISCUSSION

Useful parts and time of collection of medicinal plants play an important role to achieve desired therapeutic effect. Even different parts of same plants varies in their chemical constitution and pharmacological functions for ex. *Moola* of *Gambhari* is described in *Dashmoola* for treatment of *Shotha* But its fruit is suggested as *Rasayana*. In present time most of the medicinal plants are collected from wild. The majority of traders for financial profit collect these plants through untrained and unskilled labours. They generally extract the entire plant irrespective of its useful part. It further results into over exploitation of certain species and can even effect the potency of collected plant. This directly effect the therapeutic properties of the drug and its availability for future use. *Ayurveda acharyas* have beautifully described different usable parts and their collection in specific season and to revise this knowledge is very useful.

SUMMARY AND CONCLUSION

The description of different usable parts of herbal plants (*Prayojyanga*) and collection practices (*Sangrahan kala*) are well documented in *Ayurvedic* literature. Therapeutic efficiency depend on the quality and quantity of the secondary metabolites which in turn are influenced by

the which part of the plant is getting use and period of collection. This article highlight the importance of different usable parts and application of collection practices to achieve desired therapeutic effect because herbs without good potency become useless for physician as well as pharmaceuticals companies.

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